

Drug Safety

While drug therapy (both prescription and non-prescription) is the most common treatment for most illnesses, it is important to understand both the benefits and the risks. This is especially important for bunnies. There are a number of things that every rabbit caretaker should understand about drug therapy:

1. Most drugs have not been specifically tested and approved for use in rabbits. Therefore, there is much less information available about the effects — good and bad — of most drugs on rabbits, and very little of this is available from the manufacturers. Both safety and efficacy information for rabbits comes primarily from information shared among veterinarians and from experiences of rescuers and individual rabbit caretakers.
2. While some classes of drugs are safer for rabbits than others, no drug should be considered totally safe. All drugs have potential side-effects and not all rabbits react the same way to the same drug. Any time your rabbit is on medication of any type, you should watch carefully for changes in behavior and consult your veterinarian at the first sign of abnormal behavior.
3. If you work with more than one veterinarian, **always** make sure the doctor you are seeing is aware of **all** medications (prescription, over-the-counter, and herbal) your rabbit has been exposed to and all procedures he has undergone within the prior four weeks. Some drugs, including anesthetics, have residual effects that can interact with other medications long after they were used. Some drug interactions can be deadly, so make sure your veterinarian has your rabbit's complete recent medical history.
4. A rabbit's GI system is very different from that of a cat or dog. Medications (such as oral penicillin) that may be appropriate for other species can be deadly to rabbits. Similarly, some medications (such as Banamine®) that cause problems in other species are excellent bunny drugs. Thus, it is critical to work with a veterinarian who is experienced with rabbits.

Dosing Strategies

Dosage information is not included here because it is critical that drugs, both prescription and over-the-counter (OTC), be given only under the supervision of a qualified rabbit veterinarian. Appropriate doses for **most** drugs are given **by the manufacturer** as a range based on body weight. Your veterinarian may prescribe at the low end of the dose range and increase the dose if your rabbit's condition does not improve; or she may prescribe at the high end of the range and decrease the dose if side effects occur. Both approaches are valid. Your veterinarian's decision will be based on the severity of the condition being treated, her experience with the particular drug and its side effects, and your rabbit's medical history (including other medications and general tolerance for drugs). You may want to ask your veterinarian whether she is giving a high or low dose of the drug, particularly if you plan to discuss your rabbit's illness and treatment with other rabbit parents. This information will also help you know whether to be more watchful for side-effects or lack of improvement in your rabbit's condition. **Never** change the dose of your rabbit's medication without first discussing the change with your veterinarian.

Drug Safety Factors

It is hard to work for 20+ years in the pharmaceutical industry (working with data from clinical trials) without developing a very cautious perspective on the factors that define drug safety: side effects, interactions, and a patient's medical history. Be very wary of **anyone** who claims a medication is "completely safe." I have chosen to err on the side of caution and list as **warnings** those side effects and interactions that have actually been observed in rabbits **and** those that can be life-threatening, **even if they have never been observed in a rabbit**. It is not unusual for rare but deadly side-effects to occur in

one out of 500 or one out of 1000 patients. Indeed, there may be situations where, based on your rabbit's condition and the treatments already tried, your veterinarian may recommend a treatment or combination of treatments that include such a warning. If this happens, you and your veterinarian should openly discuss both the potential risks and the potential benefits of proposed treatment, and then make an **informed** decision whether to proceed.

When your veterinarian prescribes a drug, she will probably tell you about any "common" side effects. If she does not, ask if there is anything in particular you should watch for. The most common **easily observed** side-effects of many drugs are diarrhea/constipation and lethargy/hyperactivity — and yes, many drugs can cause completely opposite reactions in different patients. Other common side effects are more difficult to pinpoint in rabbits. If you sense your rabbit is "off" or simply "not feeling well", he **may** be suffering from nausea, depression, or another side effect from his medication. Finally, some medications can cause damage to the liver, kidneys, or other vital organs, especially when used long-term. This damage may be detected with blood work and, fortunately, values often return to normal when the drug is discontinued.

All "medications" — prescription, over the counter, and herbs — have the **potential** to interact with other medications **and even foods**. To avoid possible life-threatening interactions, it is critical that your veterinarian know **all** medications your rabbit is taking, including herbs and supplements. Depending on the substances being combined, interactions can lead to new side effects, increase the **intensity** of common side-effects, magnify the effect of a medication, or decrease the effectiveness of a medication. Some interactions can be avoided simply by staggering the times at which the various medications are given. In other cases, your veterinarian may choose to change one of the medications to avoid any problematic interaction.

Your rabbit's medical history plays an important role in determining the safety of a given treatment **for your rabbit**. How the body processes a particular medication may make a drug that is normally safe a poor choice for your rabbit. For example, drugs that are processed primarily by the kidneys or liver may be a poor choice for a rabbit known to have damage to that organ. It is also important for your veterinarian to be aware of **any** medications your rabbit has reacted poorly to in the past. This information may steer her away from drugs in the same class or drugs that the body processes in a similar manner.

All of the above are reasons that you should **always** consult a qualified rabbit veterinarian and give medications only under her supervision. Carefully follow her instructions about dose, frequency, and combining medications. Be sure to report any unusual symptoms or behavior to your veterinarian as soon as you notice them. Be diligent about scheduling follow-up appointments to check clinical signs, discuss any concerns, and perform any necessary diagnostic tests.

Finally, when giving a new medication to your rabbit, it is a good idea to give the first dose when you will be home for a while to monitor his reaction. For example, give a morning dose when you get up, rather than as you are heading out the door to work. You may also want to give a first dose when your veterinarian will be available — if there is a particular concern about side effects, consider having your veterinarian give the first dose at the clinic and stay until she is comfortable that your rabbit is reacting OK. Extra caution is advised with a new medication if one or more of the following "risk factors" exist:

- The medication frequently causes side effects
- Your rabbit is older (6+ years) or in poor health
- Your rabbit is on several medications
- Your rabbit is especially sensitive to medications